UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _25 April 2008_.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-63_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-63_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on _23 September 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _5/19/08_.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

2.   Claim 35, 53 and 54 is rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

Claim 35 recites the limitation "the first plurality of operational parameters" in

lines 12-13. There is insufficient antecedent basis for this limitation in the claim.

Claim 35 recites the limitation "the second plurality of operational parameters" in

line 13. There is insufficient antecedent basis for this limitation in the claim.

In claim 53: The limitations in claim 53 overlap with the limitations of claim 50,

lines 16-22. Claim 53 depends on claim 50.

In claim 54: The limitations in claim 54 overlap with the limitations of claim 50,

lines 23-24. Claim 54 depends on claim 50 and claim 53.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

4.   Claims 1, 2, 4-8, 10, 14, 16, 18-21, 23, 27, 29, 30, 33, 35, 36, 38-42, 44, 48, 50,

52-55, 58 and 62 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S.

Patent No. 6,771,660 to Bourlas et al.

Referring to claims 1 and 16, Bourlas et al disclose a device (Figure 1, base

station 106) that operates within a piconet (Figure 1), the device comprising:

A PHY (Figure 5, physical layer 508) that includes link quality intelligence

gathering functionality. Refer to Column 6, lines 26-33 and Column 10, lines 39-45.

A MAC (Figure 5, MAC layers 502,504) that is communicatively coupled to the

PHY. Refer to Column 6, lines 26-33 and Column 10, lines 39-45.

Wherein the link quality intelligence gathering functionality is operable to assess

a plurality of operational parameters (information regarding data transmission qualities)

that corresponds to a PHY link that communicatively couples the PHY of the device to a

PHY of at least one additional device (Figure 1, CPE's 110; Column 6, lines 26-33).

The PHY of the device is operable to provide assessed information

corresponding to the plurality of operational parameters to the MAC.

The MAC processes the assessed information corresponding to the plurality of

operational parameters.

Based on the processed assessed information, the MAC modifies at least one

operational parameter (modulation) of the plurality of operational parameters. "The BS

MAC preferably uses information from the PHY regarding signal quality to determine to

modulation required for a particular CPE..." (Column 14, lines 48-50).

Referring to claim 2, Bourlas et al disclose in Figure 1 wherein the device maintains peer to peer communication with the at least one additional device (CPE 110). Refer to Column 6, lines 26-33.

Referring to claim 4, Bourlas et al disclose wherein the MAC directs the link quality intelligence gathering functionality of the PHY to assess the plurality of operational parameters. "The BS MAC preferably uses information from the PHY regarding signal quality to determine to modulation required for a particular CPE..." (Column 14, lines 48-50).

Referring to claims 5 and 18, Bourlas et al disclose wherein:

The MAC directs the link quality intelligence gathering functionality of the PHY to assess a first plurality of operational parameters (information regarding signal quality) that is a subset of the plurality of operational parameters (information regarding data transmission qualities). Refer to Column 14, lines 40-54.

The PHY of the device provides assessed information corresponding to the first plurality of operational parameters to the MAC. The BS PHY sends information regarding signal quality to the BS MAC. Refer to Column 14, lines 48-50.

The MAC processes the assessed information corresponding to the first plurality of operational parameters to the MAC. Refer to Column 14, lines 48-50.

Based on the processed assessed information corresponding to the first plurality of operational parameters to the MAC, the MAC directs the link quality intelligence gathering functionality of the PHY to assess a second plurality of operational parameters (modulation; data in one frame can be modulated using different techniques

such as QAM-4 and QAM-16; Column 8, lines 13-47) that is a subset of the plurality of

operational parameters. Depending on the signal quality, the BS MAC determines a

new modulation scheme. Refer to Column 14, lines 48-50. The BS PHY can send

information to the BS MAC about the modulation scheme using the PHY control portion

312 of a frame header 302. Refer to Column 8, lines 42-45.

Referring to claims 6 and 19, Bourlas et al do not specifically disclose wherein

the first plurality of operational parameters and the second plurality of operational

parameters include at least one common operational parameter. However, since the

signal quality affects the modulation scheme used, the first plurality of operational

parameters and the second plurality of operational parameters can include a same

parameter. For example, a certain modulation scheme is required to achieve an

acceptable bit rate error. Therefore, the PHY and the MAC layers can exchange bit rate

error information. Refer to Column 14, lines 40-54.

Referring to claims 7 and 20, Bourlas et al disclose:

During a first time, the MAC directs the link quality intelligence gathering

functionality of the PHY to assess a first plurality of operational parameters (information

regarding signal quality) that is a subset of the plurality of operational parameters

(information regarding data transmission qualities). Refer to Column 14, lines 40-54.

During a second time, the MAC directs the link quality intelligence gathering

functionality of the PHY to assess a second plurality of operational parameters

(modulation; data in one frame can be modulated using different techniques such as

QAM-4 and QAM-16; Column 8, lines 13-47) that is a subset of the plurality of

operational parameters. The BS PHY can send information to the BS MAC about the
modulation scheme using the PHY control portion 312 of a frame header 302. Refer to
Column 8, lines 42-45.

Referring to claims 8 and 21, refer to the rejection of claims 6 and 19.

Referring to claims 10 and 23, Bourlas et al disclose wherein:

A first operational parameter of the plurality of operational parameters that
corresponds to the PHY link corresponds to a first modulation used to modulate a signal
transmitted across the PHY link.

A second operational parameter of the plurality of operational parameters that
corresponds to the PHY link corresponds to an interference (signal quality) of the signal
transmitted across the PHY link.

The MAC processes the assessed information corresponding to the second
operational parameter thereby monitoring the interference of the signal transmitted
across the PHY link.

Based on a change in the interference of the signal transmitted across the PHY
link, the MAC changes the first operational parameter from the first modulation to a
second modulation.

The second modulation is subsequently used to modulate the signal transmitted
across the PHY link. "The BS MAC preferably uses information from the PHY regarding
signal quality to determine to modulation required for a particular CPE…" (Column 14,
lines 48-50).

Referring to claims 14 and 27, Bourlas et al disclose wherein an operational

parameter of the plurality of operational parameters corresponds to at least one of:

A distance between the device and the at least one additional device (none).

A location of the device (none).

A location of the at least one additional device (none).

Interference of a signal transmitted across the PHY link (none).

A data rate employed for a signal transmitted across the PHY link (none).

A QoS of the PHY link (signal quality; Column 14, lines 48-50).

A SNR of a signal transmitted across the PHY link (none).

A PN code assigned to spread UWB pulses of a signal transmitted across the

PHY link (none).

A power level of a signal transmitted across the PHY link (none).

A code rate of a signal transmitted across the PHY link (none).

A modulation that modulates a signal transmitted across the PHY link (Column

14, lines 48-50).

A TFC that modulates OFDM symbols of a signal transmitted across the PHY link

(none).

Referring to claim 29, refer to the rejection of claims 1 and 16; and claims 7 and

20. Furthermore, Bourlas et al disclose:

The MAC processes at least one of assessed information corresponding to the

first plurality of operational parameters (none) and assessed information corresponding

to the second plurality of operational parameters (modulation).

Based on the processed assessed information, the MAC modifies at least one operational parameters of at least one of the first plurality of operational parameters (none) and the second plurality operational parameters (modulation). "The BS MAC preferably uses information from the PHY regarding signal quality to determine to modulation required for a particular CPE..." (Column 14, lines 48-50).

Referring to claim 30, refer to the rejection of claims 6 and 19.

Referring to claim 33, refer to the rejection of claims 14 and 27.

Referring to claim 35, Bourlas et al disclose a method for providing link quality intelligence from a PHY (Figure 5, physical layer 508) to at least one higher protocol layer (Figure 5, MAC layers 502,504) of a device (Figure 1, base station 106) that operates within a piconet. Refer to Column 6, lines 26-33 and Column 10, lines 39-45. The method comprises:

Assessing a plurality of operational parameters (information regarding data transmission qualities) that corresponds to a PHY link that communicatively couples the PHY of the device to a PHY of at least one additional device (Figure 1, CPE's 110; Column 6, lines 26-33).

Providing assessed information corresponding to the plurality of operational parameters to a MAC (Figure 5, MAC layers 502,504) of the device. Refer to Column 10, lines 39-45.

Employing the MAC to assess information corresponding to the plurality of operational parameters.

Based on the processed assessed information, employing the MAC to modify at least one operational parameter (modulation) of at least one of the first plurality of operational parameters and the second plurality of operational parameters. "The BS MAC preferably uses information from the PHY regarding signal quality to determine to modulation required for a particular CPE…" (Column 14, lines 48-50).

Wherein the MAC is communicatively coupled to the PHY. Refer to Column 10, lines 39-45.

Referring to claim 36, refer to the rejection of claim 2.

Referring to claim 38, refer to the rejection of claim 4.

Referring to claim 39, refer to the rejection of claims 5 and 18.

Referring to claim 40, refer to the rejection of claims 6 and 19.

Referring to claim 41, refer to the rejection of claims 7 and 20.

Referring to claim 42, refer to the rejection of claims 6 and 19.

Referring to claim 44, refer to the rejection of claims 10 and 23.

Referring to claim 48, refer to the rejection of claims 14 and 27.

Referring to claim 50, refer to the rejection of claims 1 and 16, claims 7 and 20 and claims 8 and 21.

Referring to claim 52, refer to the rejection of claim 4.

Referring to claim 53, refer to the rejection of claims 5 and 18.

Referring to claim 54, refer to the rejection of claims 6 and 19.

Referring to claim 55, refer to the rejection of claim 2.

Referring to claim 58, refer to the rejection of claims 10 and 23.

Referring to claim 62, refer to the rejection of claims 14 and 27.

5.   Claims 3, 17, 31, 37 and 51 are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent No. 6,771,660 to Bourlas et al in view of U.S. Patent No.

6,999,432 to Zhang et al.

Bourlas et al do not disclose wherein the device also includes a higher

application layer, communicatively coupled to the MAC, that supports a first service; the

MAC provides the processed assessed information to the higher application layer; and

based on the processed assessed information provided to the higher application layer,

the higher application layer terminates the first service to maintain communication

between the device and the at least one additional device via the PHY link.

Zhang et al disclose that the PHY and MAC layers are connected to a higher

application layer. Performance measurement information such as throughput and BER

are also reported to the application layer. Using this information, the application payer

can perform resource allocation for multimedia transmission. Resource allocation can

include terminating certain services by not allocating resources to them to support other

services. Refer to Column 7, lines 49-57; Column 8, lines 27-35; Column 9, line 38 to

Column 10, line 2; and Column 15, line 63 to Column 16, line 2. Therefore, it would

have been obvious to one of ordinary skill in the art at the time the invention was made

to include wherein the device also includes a higher application layer, communicatively

coupled to the MAC, that supports a first service; the MAC provides the processed

assessed information to the higher application layer; and based on the processed

assessed information provided to the higher application layer, the higher application

layer terminates the first service to maintain communication between the device and the

at least one additional device via the PHY link. One would have been motivated to do

so to support certain services based on channel qualities.

6.   Claims 9, 15, 22, 28, 34, 43, 49, 56, 57 and 63 are rejected under 35 U.S.C.

103(a) as being unpatentable over U.S. Patent No. 6,771,660 to Bourlas et al in view of

U.S. Publication No. 2003/0054767 to Mandhyan et al.

Referring to claims 9, 22, 43 and 57, Bourlas et al disclose in Figure 1 wherein:

The at least one additional device is a *base station* (base station 106). The

disclosed method can be executed by software in both the base stations and the CPE.

Refer to Column 6, lines 26-33.

The PHY of the at least one additional device is a PHY of the *base station*. Refer

to Column 10, lines 39-45.

The device is a *CPE* (CPE 110). The disclosed method can be executed by

software in both the base stations and the CPE. Refer to Column 6, lines 26-33.

The PHY of the *base station* includes link quality intelligence gathering

functionality. Refer to Column 14, lines 40-54.

The *base station* includes a MAC that is communicatively coupled to the PHY of

the *base station*. Refer to Column 6, lines 26-33.

The MAC of the *base station* includes *CPE* direction functionality (to change the

modulation used in the CPE). Refer to Column 14, lines 48-50.

The link quality intelligence gathering functionality of the PHY of the *base station*

assesses at least one additional plurality of operational parameters (information

regarding signal quality) that corresponds to the PHY link that communicatively couples the PHY of the *CPE* to the PHY of the *base station*.

The PHY of the *base station* provides at least one additional assessed information corresponding to the at least one additional plurality of operational parameters to the MAC of the *base station*.

The MAC of the *base station* processes the at least one additional assessed information corresponding to the at least one additional plurality of operational parameters. The BS MAC receives information from the PHY regarding signal quality. Refer to Column 14, lines 48-50.

The *CPE* transmits information corresponding to the PHY link from the *CPE* to the *base station*. The CPE requests bandwidth from the base station for different services, with each service requiring different priorities, service types and QoS. Refer to Column 6, lines 26-33.

Based on the processed at least one additional assessed information and based on the information corresponding to the PHY link that is transmitted from the *CPE* to the *base station*, the *CPE* direction functionality of the *base station's* MAC directs the *CPE* to change at least operational parameter (modulation) of the plurality of operational parameters that corresponds to the PHY link that communicatively couples the PHY of the *CPE* to the PHY of the *base station*. "The BS MAC preferably uses information from the PHY regarding signal quality to determine to modulation required for a particular CPE and, therefore, the bandwidth that is available" (Column 14, lines 48-51).

Bourlas et al do not disclose that the at least one additional device is a *PNC* and

that the device is a *DEV*.

Mandhyan et al disclose in Figure 2 that a base station 22 can be a piconet

master and mobile CPE's 24 can be piconet slaves. Refer to Sections 0019-0024.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to include that the at least one additional device is a *PNC* and that

the device is a *DEV*. One would have been motivated to do so to utilize the Bluetooth

protocol which can operate in a noisy environment, uses a fast acknowledgement and

frequency hopping technique to form a robust link, and avoids interference. Refer to

Section 0019.

Referring to claims 15, 28, 34, 49 and 63, Bourlas et al disclose in Figure 1

wherein the device is a *base station* (base station 106) and the at least one additional

device is a *CPE* (CPE 110). The disclosed method can be executed by software in both

the base stations and the CPE. Refer to Column 6, lines 26-33.

Bourlas et al do not disclose that the device is a *PNC* and that the at least one

additional device is a *DEV*. Refer to the Mandhyan et al rejection part of claims 9 and

22.

Referring to claim 56, Bourlas et al disclose in Figure 1 wherein the

communication device is a *base station* (base station 106) and the at least one

additional device is a *CPE* (CPE 110). The disclosed method can be executed by

software in both the base stations and the CPE. Refer to Column 6, lines 26-33.

Bourlas et al do not disclose that the communication device is a *DEV* and that

the at least one additional device is a *DEV*. Refer to the Mandhyan et al rejection part

of claims 9 and 22.

7.   Claims 11, 24, 45 and 59 are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent No. 6,771,660 to Bourlas et al in view of U.S. Patent No.

7,391,714 to Blasco Claret et al.

Bourlas et al do not disclose wherein a first operational parameter of the plurality

of operational parameters that corresponds to the PHY link corresponds to a first TFC

that directs the modulation of OFDM symbols of a signal transmitted across the PHY

link; a second operational parameter of the plurality of operational parameters that

corresponds to the PHY link corresponds to interference of the signal transmitted across

the PHY link; the MAC processes the assessed information corresponding to the

second operational parameter thereby monitoring the interference of the signal

transmitted across the PHY link; based on a change in the interference of the signal

transmitted across the PHY link, the MAC changes the first operational parameter from

the first TFC to a second TFC; the second TFC is subsequently used to direct

modulation of OFDM symbols of the signal transmitted across the PHY link.

Blasco Claret et al disclose a method to continuously calculate the SNR for each

one of the carriers of the OFDM modulation so that different users can use different

carriers in the same OFDM symbol. Interference affects the SNR of the system. Refer

to Column 3, lines 55-63 and Column 6, lines 16-22. Therefore, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to include

wherein a first operational parameter of the plurality of operational parameters that corresponds to the PHY link corresponds to a first TFC that directs the modulation of OFDM symbols of a signal transmitted across the PHY link; a second operational parameter of the plurality of operational parameters that corresponds to the PHY link corresponds to interference of the signal transmitted across the PHY link; the MAC processes the assessed information corresponding to the second operational parameter thereby monitoring the interference of the signal transmitted across the PHY link; based on a change in the interference of the signal transmitted across the PHY link, the MAC changes the first operational parameter from the first TFC to a second TFC; the second TFC is subsequently used to direct modulation of OFDM symbols of the signal transmitted across the PHY link. One would have been motivated to do so to adjust the modulation according to the interference to achieve the best signal reception.

8.   Claims 12, 25, 46 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,771,660 to Bourlas et al in view of U.S. Patent No. 7,330,433 to Shao et al.

Bourlas et al do not disclose wherein a first operational parameter of the plurality of operational parameters that corresponds to the PHY link corresponds to a distance between the device and the at least one additional device; a second operational parameter of the plurality of operational parameters that corresponds to the PHY link corresponds to a first modulation used to modulate a signal transmitted across the PHY link; the MAC processes the assessed information corresponding to the second operational parameter thereby determining the distance between the device and the at

least one additional device; based on a change in the distance between the device and

the at least one additional device, the MAC changes the second operational parameter

from the first modulation to a second modulation; and the second modulation is

subsequently used to modulate the signal transmitted across the PHY link.

Shao et al disclose an adaptive modulation and coding scheme (AMC) that

matches the modulation with channel conditions. A UE closer to the base station is

assigned a higher order modulation with higher code rates. The modulation-order

and/or code rate decreases as the distance between the UE and the base station

increases. Refer to Column 1, lines 36-50. Therefore, it would have been obvious to

one of ordinary skill in the art at the time the invention was made to include wherein a

first operational parameter of the plurality of operational parameters that corresponds to

the PHY link corresponds to a distance between the device and the at least one

additional device; a second operational parameter of the plurality of operational

parameters that corresponds to the PHY link corresponds to a first modulation used to

modulate a signal transmitted across the PHY link; the MAC processes the assessed

information corresponding to the second operational parameter thereby determining the

distance between the device and the at least one additional device; based on a change

in the distance between the device and the at least one additional device, the MAC

changes the second operational parameter from the first modulation to a second

modulation; and the second modulation is subsequently used to modulate the signal

transmitted across the PHY link. One would have been motivated to do so to adjust the

modulation based on the distance between two devices to achieve the best signal reception.

9.   Claims 13, 26, 32, 47 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,771,660 to Bourlas et al in view of U.S. Patent No. 5,561,666 to Christensen et al.

Bourlas et al do not disclose wherein the MAC processes the assessed information corresponding to the plurality of operational parameters; the at least one additional device provides a registration request to the device when trying to register to the piconet; and based on the processed assessed information, the MAC determines whether to accept or deny the registration request of the at least one additional device.

Christensen et al disclose that a station wishing to enter the network generates and transmits a MAC registration request frame to ports. The ports that can support the station will respond with a positive registration response. Refer to Column 2, lines 16-27. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include wherein the MAC processes the assessed information corresponding to the plurality of operational parameters; the at least one additional device provides a registration request to the device when trying to register to the piconet; and based on the processed assessed information, the MAC determines whether to accept or deny the registration request of the at least one additional device. One would have been motivated to do so to evaluate whether or not a device can join the piconet.

Conclusion

10.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to CHRISTINE NG whose telephone number is (571)272-
3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Firmin Backer can be reached on (571) 272-6703. The fax phone number
for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
published applications may be obtained from either Private PAIR or Public PAIR.
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C. Ng
July 18, 2008

/FIRMIN BACKER/
Supervisory Patent Examiner, Art Unit 2616